

## What Is Claimed Is:

- [c1] An imaging system, comprising:
- a two-dimensional array of pixels;
  - an input device that includes a sensor that provides an electronic signal that represents to the image two-dimensional array of pixels; and
  - a controller,
- the electronic signal controlled by the controller so that the electronic signal is either stored in the first capacitor, or is stored in the second capacitor.
- [c2] The imaging system according to claim 1, the device two-dimensional array of pixels further comprising:
- a plurality of transistors and at least two control signals, one of the at least two control signals controlling one of the plurality of transistors so that the electronic signal is stored in the first capacitor, and the other one of the at least two control signals controlling another one of the plurality of transistors so that the electronic signal is stored in the second capacitor.
- [c3] The imaging system according to claim 2, further comprising the first capacitor being independently active for greater than 10 microseconds.
- [c4] The imaging system according to claim 2, the two-dimensional array of pixels device further comprising a third and fourth capacitor connected to the sensor.
- [c5] The imaging system according to claim 4, the two-dimensional array of pixels further comprising:
- a plurality of control signals, one of the at least plurality of control signals controlling a third one of the plurality of transistors so that the electronic signal is stored in the third capacitor, and at least another one of the plurality of control signals controlling a fourth one of the plurality of transistors so that the electronic signal is stored in the fourth capacitor.
- [c6] The imaging system according to claim 3, the imaging system further comprising a transmitter that transmits an x-ray source that is received by the

input device so that the electronic signal represents an x-ray image taken of a human body.

- [c7] The imaging system according to claim 6, further comprising the transmitter being synchronized to a switching of the control signals to the two-dimensional array of pixels.
- [c8] The imaging system according to claim 4, the imaging system further comprising a plurality of transmitters that transmit different optical images onto the two-dimensional array of pixels, or which illuminate different attributes of an object whose image lands on the two-dimensional array of pixels.
- [c9] The imaging system according to claim 8, further comprising the plurality of transmitters are synchronized to a switching of the control signals to the two-dimensional array of pixels, such that one attribute is stored in the first capacitor, and another attribute is stored in the second capacitor.
- [c10] The imaging system according to claim 9, further comprising the different attributes of the object being different colors.
- [c11] The imaging system according to claim 4, the imaging system further comprising a readout scheme which resets a voltage across the first and second capacitors to different values, such that the sensor is sensitive to different attributes of the image due to a changed voltage across the sensor.
- [c12] An imaging system, comprising:
  - a two-dimensional array of pixels;
  - an input device that includes a sensor which that provides an electronic signal that represents an image to the two-dimensional array of pixels;
  - and
  - a controller that provides control signals,
  - the electronic signal controlled by the controller so that the electronic signal is either stored in the first capacitor during a phase of one of the control signals, or not stored in the first capacitor during a phase of another one of the control signals.

- [c13] The imaging system according to claim 12, the two-dimensional array of pixels further comprising:
- a plurality of transistors, the one of the control signals controlling one of the plurality of transistors so that the electronic signal is stored in the first capacitor during the phase of the one of the control signals, and the another one of the control signals controlling another one of the plurality of transistors so that the electronic signal is not stored in the first capacitor during the second phase of the another one of the control signals.
- [c14] The imaging system according to claim 12, the imaging system further comprising a transmitter that transmits an x-ray that is received by the input device so that the electronic signal represents an x-ray image taken of a human body, where the transmission of the x-rays are synchronized to the control of the two-dimensional array of pixels.
- [c15] The imaging system according to claim 13, further comprising the controller controlling the electronic signal based on color features within the electronic signal so that one color of the electronic signal is stored in the first capacitor, and another color of the electronic image is not stored in the first capacitor.
- [c16] The imaging system according to claim 13, wherein by not storing the electronic signal in the first capacitor, storage of sensor leakage current in the first capacitor is prevented.
- [c17] An imaging system, comprising:
- a two-dimensional array of pixels;
  - an input device that includes a sensor which that provides an electronic signal that represents an image to the two-dimensional array of pixels;
  - at least one capacitor; and
  - a controller that provides a first and second control signal, the electronic signal controlled by the controller so that the electronic signal is either added to the at least one capacitor when a phase of the first control signal is high and a phase of the second control signal is low, or the electronic signal is subtracted from the at least one capacitor when

a phase of the first control signal is low and the phase of the second control signal is high.